



Mathematics

IGCSE Additional Mathematics



YEAR 9 OPTION BOOKLET: 2024-2026

Subject: Mathematics

Course Title: IGCSE Additional Mathematics

Why study this subject:

Cambridge IGCSE Additional Mathematics is accepted by universities and employers as proof of essential Mathematical knowledge and ability.

The Additional Mathematics syllabus is intended for high ability candidates who have achieved, or are likely to achieve, Grade A*, A or B in the Cambridge IGCSE Mathematics examination.

Successful Cambridge IGCSE Additional Mathematics candidates gain lifelong skills, including:

- the further development of mathematical concepts and principles
- the extension of mathematical skills and their use in more advanced techniques
- an ability to solve problems, present solutions logically and interpret results
- a solid foundation for further study.

Prior learning

We recommend that candidates who are beginning this course should be currently studying or have previously studied Cambridge IGCSE or Cambridge O Level Mathematics.

Syllabus aims:

The aims are to enable candidates to:

- engage in mathematics in a way that builds on their existing mathematical knowledge and enhances their enjoyment of the subject
- develop their instinct for mathematical enquiry and use it flexibly to suit the requirements of a situation
- reinforce and extend mathematical skills and apply them to complex problems
- use creativity and resilience to analyse and solve problems
- reinforce their competency, confidence, and fluency in their use of techniques with and without a calculator, strengthening mathematical understanding and communication skills
- justify their reasoning using structured arguments
- extend their ability to reason logically, make inferences and draw conclusions
- enrich their understanding of interdependence of, and connections between, different areas of mathematics
- acquire a solid foundation for advanced study of mathematics or highly numerate subjects.

Assessment at a glance:

All candidates take two components. Candidates will be eligible for grades A* to E.

Candidates should have a scientific calculator for Paper 2.

Paper	Duration	Weightage
Paper 1 Non-calculator. 80 marks. Structured and unstructured questions. Use of a calculator is not allowed. Externally assessed.	2 hours	50%
Paper 2 Calculator. 80 marks. Structured and unstructured questions. A scientific calculator is required. Externally assessed.	2 hours	50%

Grades A* to E will be available for candidates who achieve the required standards. Since there is no Core Curriculum for this syllabus, Grades F and G will not be available. Therefore, candidates who do not achieve

the minimum mark for Grade E will be unclassified.

Syllabus Content

The Additional Mathematics syllabus is intended for high ability candidates who have achieved, or are likely to achieve Grade A*, A or B in the Cambridge IGCSE Mathematics examination. The curriculum objectives are therefore assessed at one level only (Extended). As for Extended level syllabuses in other subjects, Grades A* to E will be available.

The Curriculum objectives (Core and Supplement) for Cambridge IGCSE Mathematics will be assumed as prerequisite knowledge.

Content overview

All candidates study the following topics

- **Functions**
- **Quadratic functions**
- **Factors of polynomials**
- **Equations, inequalities and graphs**
- **Simultaneous equations**
- **Logarithmic and exponential functions**
- **Straight-line graphs**
- **Coordinate geometry of the circle**
- **Circular measure**
- **Trigonometry**
- **Permutations and combinations**
- **Series**
- **Vectors in two dimensions**
- **Calculus**